

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of: )  
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Jonathan D. ZOOK et al. ) Prior Group Art Unit: 1711  
)  
Original Patent No.: 5,912,319 ) Prior Examiner: Duc Truong  
)  
Original Patent Issue Date: June 15, 1999 )  
)  
Reissue Filing Date: February 25, 2004 )  
)  
For: COMPOSITIONS AND METHOD )  
FOR PRODUCING FUEL )  
RESISTANT LIQUID )  
POLYTHIOETHER POLYMERS )  
WITH GOOD LOW TEMPERATURE )  
FLEXIBILITY )

Commissioner for Patents  
Washington, DC 20231

Sir:

**REQUEST UNDER 37 C.F.R. § 1.607 FOR AN INTERFERENCE WITH**  
**U.S. PATENT 6,525,168 B2 AND U.S. PATENT APPLICATION NO. 10/368,135**

By the Amendment filed February 25, 2004, claims 1-35 are pending in the reissue application of U.S. Patent No. 5,912,319. A copy of U.S. Patent 5,912,319 and the Amendment filed February 25, 2004 are attached as Appendices, A and B, respectively.

Claims 24-35 are presented for purposes of an interference with U.S. Patent No. 6,525,168 B2 (the '168 patent) and U.S. Application No. 10/368,135 (the '135 application). A copy of the '168 patent and the '135 application are attached as Appendices C and D, respectively. As Applicants will demonstrate, claims 24-35 define allowable subject matter that

interferes with the inventions claimed in the '168 patent and the '135 application. Thus, Applicants request that an interference be declared between the present reissue application and the '168 patent and the '135 application.

**The Specification of Applicant's Reissue Application Fully Supports New Claims 24-35**

Applicants' claims 24-35, like claims 1-6, 8, and 10-13 of the '168 patent and claims 9 and 10 of the '135 application, are drawn to a single patentable invention. Specifically, the patentable invention encompasses polythioether polymers and curable compositions comprising polythioether polymers where the polythioether polymers have the structure of  $\text{H-S-R}^1\text{--}[\text{S--}(\text{CH}_2)_2\text{--O--}(\text{R}^2\text{--O--})_m\text{--}(\text{CH}_2)_2\text{--S--R}^1]_n\text{--S--H}$ , and mixtures of polythioether polymers comprising  $\text{B--}\{\text{S--R}^1\text{--}[\text{S--}(\text{CH}_2)_2\text{--O--}(\text{R}^2\text{--O--})_m\text{--}(\text{CH}_2)_2\text{--S--R}^1]_n\text{--S--H}\}_z$ , where the constituents are as defined in the claims.

Certain embodiments of the claimed invention and the '168 patent and the '135 application are directed to very similar inventions. For example, both Applicants' claimed invention and the claimed invention of the '168 patent provide for polythioether polymers and mixtures of polythioether polymers having the identical and similar chemical structures. Both Applicants' claimed invention and the claimed invention of the '135 application provide for curable compositions comprising polythioether polymers, a filler and a curing agent.

As shown below, the reissue application, as well as Applicants' domestic priority document, support claims 24-35. Thus Applicants' claims 24-35 are entitled to an effective filing date corresponding to Applicants' domestic priority application filing date; the present application is a reissue of U.S. Patent No. 5,912, 319 issued June 15, 1999, which claims domestic priority to U.S. Application No. 08/802,130 filed February 19, 1997.

Applicants respectfully submit that support for new claims 24-35 can be found in the specification and in the claims of U.S. Patent No. 5,912,319, including but not limited to:

<i>Claim 24 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
<p>A polythioether comprising:</p> $\text{H-S-R}^1\text{--}[\text{S--}(\text{CH}_2)_2\text{--O--}(\text{R}^2\text{--O})_m\text{--}(\text{CH}_2)_2\text{--S--R}^1\text{--}]_n\text{--S--H}$ <p>wherein</p>	<p>"In their most general aspect, the inventive polythioethers include a structure having the formula I</p> $\text{--R}^1\text{--}[\text{S--}(\text{CH}_2)_2\text{--O--}[\text{R}^2\text{--O--}]_m\text{--}(\text{CH}_2)_2\text{--S--R}^1\text{--}]_n\text{--}"$ <p><i>Col. 5, lines 24-27.</i></p> <p><i>Claim 5.</i></p> <p>"A first preferred embodiment of the inventive polythioethers has the formula II</p> $\text{A--}(\text{--}[\text{R}^3]\text{--R}^4)_2 \quad \text{II}$ <p>..."</p> <p><i>Col. 6, lines 40-43.</i></p> <p>"According to one preferred embodiment, the inventive polythioether is a difunctional thiol-terminated (uncapped) polythioether. That is, in formula II, <math>y=0</math> and <math>\text{R}^4</math> is <math>\text{--SH}</math>. Thus, the polythioether has the following structure:</p> $\text{HS--R}^1\text{--}[\text{S--}(\text{CH}_2)_2\text{--O--}[\text{R}^2\text{--O--}]_m\text{--}(\text{CH}_2)_2\text{--S--R}^1\text{--}]_n\text{--SH}"$ <p><i>Col. 6, lines 61-67.</i></p>
<p><math>\text{R}^1</math> is selected from the group consisting of <math>\text{C}_{2-6}</math> n-alkylene and a <math>\text{--[}(\text{--CH}_2\text{--})_p\text{--X]}_q\text{--}(\text{CH}_2\text{--})_r\text{--}</math> group;</p>	<p>"<math>\text{R}^1</math> denotes a divalent <math>\text{C}_{2-6}</math> n-alkylene, . . . or <math>\text{--[}(\text{--CH}_2\text{--})_p\text{--X]}_q\text{--}(\text{CH}_2\text{--})_r\text{--}</math> . . . ,"</p> <p><i>Col. 5, lines 31-33; col. 9, lines 16-17.</i></p>
<p><math>\text{R}^2</math> is selected from the group consisting of <math>\text{C}_{2-6}</math> n-alkylene, and <math>\text{C}_{6-8}</math> cycloalkylene;</p>	<p>"<math>\text{R}^2</math> denotes . . . , a divalent <math>\text{C}_{2-6}</math> n-alkylene, . . . <math>\text{C}_{6-8}</math> cycloalkylene or . . ."</p> <p><i>Col. 5, lines 36-37.</i></p>
<p>X is selected from the group consisting of O and S;</p>	<p>"X denotes one selected from the group consisting of O, S . . ."</p> <p><i>Col. 5, line 42; col. 9, lines 16-17.</i></p>
<p>m is an integer between 0 and 10;</p>	<p>"m is a rational number from 0 to 10,"</p>

	<i>Col. 5, line 46.</i>
p is an integer between 2 and 6;	"p is an integer ranging from 2 to 6," <i>Col. 5, line 48.</i>
q is an integer between 1 and 5;	"q is an integer from 1 to 5," <i>Col. 5, line 49.</i>
r is an integer between 2 and 10; and	"r is an integer from 2 to 10." <i>Col. 5, line 50.</i>
n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.	<p>"n is an integer from 1 to 60," <i>Col. 5, line 47.</i></p> <p>"Desirably, the inventive polythioethers have number average molecular weights ranging from about 500 to 20,000, preferably about 1,000 to 10,000, very preferably about 2,000 to 5,000." <i>Col. 6, lines 20-23.</i></p> <p><u><i>Comment</i></u> A Dalton is defined as a unit of molecular weight having one-twelfth the mass of a carbon atom in its ground state. <i>IUPAC Compendium of Chemical Terminology</i>. A carbon atom has an atomic mass of 12.011 grams per mole. Thus, for practical purposes, a Dalton is roughly equivalent to one gram per mole. One skilled in the art would appreciate that a molecular weight of a polymer is in units of Daltons.</p>

<i>Claim 25 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
The polythioether of claim 24 wherein R <sup>1</sup> is C <sub>2</sub> -C <sub>6</sub> n-alkylene.	"R <sup>1</sup> denotes a divalent C <sub>2-6</sub> n-alkylene . . ." <i>Col. 5, line 31.</i>

<i>Claim 26 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
The polythioether of claim 24 where R <sup>1</sup> is –	"In a preferred embodiment, X is O . . . , and

$[(-CH_2-)_p-O-]_q-(-CH_2-)_r-$ where r, p, and q are 2.	thus $R^1$ is $-[(-CH_2-)_p-O-]_q-(-CH_2-)_r-$ . . . Preferably, the indices p and r are equal, and very preferably both have the value of 2.” <i>Col. 9, lines 15-19.</i>
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<i>Claim 27 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
The polythioether of claim 24 wherein $R^2$ is $C_2$ alkyleneoxy.	“ $R^2$ denotes . . . $-[(-CH_2-)_p-X-]_q-(-CH_2-)_r-$ . . .” <i>Col. 5, lines 36-38.</i>

<i>Claim 28 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
The polythioether of claim 24 wherein the molecular weight of said polythioether ranges from about 2,000 to about 5,000 Daltons.	“Desirably, the inventive polyether has a number average molecular weight ranging from about 500 to about 20,000 grams per mole, more preferably from about 1,000 to about 10,000, and most preferably from about 2,000 to about 5,000, . . .” <i>Col 6, lines 20-23.</i>  <u><i>Comment</i></u> A Dalton is defined as a unit of molecular weight having one-twelfth the mass of a carbon atom in its ground state. <i>IUPAC Compendium of Chemical Terminology</i> . A carbon atom has an atomic mass of 12.011 grams per mole. Thus, for practical purposes, a Dalton is roughly equivalent to one gram per mole. One skilled in the art would appreciate that a molecular weight of a polymer is in units of Daltons.

<i>Claim 29 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
The polythioether of claim 24 having an atomic weight percentage ratio of C:S:O of 35-49 : 20-60 : 0-20.	The polythioethers disclosed in the specification have atomic weight percentage ratios within the claimed range. For example, when $R^1$ and $R^2$ are $C_2$ n-alkylene, $X=0$ , and $m=1$ , a polythioether having the

	formula of claim 1 and an molecular weight of 3,416 Daltons where n=16, will have an atomic weight percentage ratio of C:S:O of 45.5 : 31.8 : 14.9.
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<i>Claim 30 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
A mixture of polythioether polymers comprising a polythioether polymer having the formula	"Polythioethers having higher functionality are also within the scope of the present invention." <i>Col. 7, lines 32-33.</i>
$B-\{-S-R^1-[-S-(CH_2)_2-O-(R^2-O)_m-(CH_2)_2-S-R^1]_n-S-H\}_z$ <p>wherein</p>	<p>"Polyfunctional polythioethers according to the present invention thus preferably have the formula III</p> $B-(A-[R^3]_y-R^4)_z \quad \text{III}"$ <p><i>Col 7, lines 52-55.</i></p> <p>"A denotes a structure having the formula I, y is 0 or 1, R<sup>3</sup> denotes a single bond when y=0 ..., R<sup>4</sup> denotes -SH when y=0 ..., " <i>Col. 7, lines 57-65.</i></p> <p>"Polythioethers as described above have a wide range of average functionality." <i>Col. 8, lines 36-37.</i></p>
R <sup>1</sup> is selected from the group consisting of C <sub>2-6</sub> n-alkylene, and a -[(-CH <sub>2</sub> ) <sub>p</sub> -X] <sub>q</sub> -(-CH <sub>2</sub> ) <sub>r</sub> - group;	"R <sup>1</sup> denotes a divalent C <sub>2-6</sub> n-alkylene, ... or -[(-CH <sub>2</sub> ) <sub>p</sub> -X] <sub>q</sub> -(-CH <sub>2</sub> ) <sub>r</sub> - ..., " <i>Col. 5, lines 31-33; col. 9, lines 15-17.</i>
R <sup>2</sup> is selected from the group consisting of C <sub>2-6</sub> n-alkylene, C <sub>6-8</sub> cycloalkylene;	"R <sup>2</sup> denotes ..., a divalent C <sub>2-6</sub> n-alkylene, ..., C <sub>6-8</sub> cycloalkyl ..." <i>Col. 5, lines 36-37.</i>
X is selected from the group consisting of O and S;	"X denotes one selected from the group consisting of O, S ..." <i>Col. 5, line 42; col. 9, lines 16-17.</i>
m is an integer between 0 and 10;	"m is a rational number from 0 to 10," <i>Col. 5, line 46.</i>

p is an integer between 2 and 6;	"p is an integer ranging from 2 to 6," <i>Col. 5, line 48.</i>
q is an integer between 1 and 5;	"q is an integer from 1 to 5," <i>Col. 5, line 49.</i>
r is an integer between 2 and 10;	"r is an integer from 2 to 10," <i>Col. 5, line 47.</i>
z is an integer from 3 to 6;	"z is an integer from 3 to 6." <i>Col. 8, line 2.</i>
B is a z-valent group of a polyfunctionalizing agent; and	"B denotes a z-valent residue of a polyfunctionalizing agent," <i>Col. 8, lines 3-4.</i>
n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.	<p>"n is an integer from 1 to 60." <i>Col. 2, line 41.</i></p> <p>"Desirably, the inventive polythioethers have number average molecular weights ranging from about 500 to 20,000, preferably about 1,000 to 10,000, very preferably about 2,000 to 5,000." <i>Col. 6, lines 20-23.</i></p> <p><u>Comment</u> A Dalton is defined as a unit of molecular weight having one-twelfth the mass of a carbon atom in its ground state. <i>IUPAC Compendium of Chemical Terminology</i>. A carbon atom has an atomic mass of 12.011 grams per mole. Thus, for practical purposes, a Dalton is roughly equivalent to one gram per mole. One skilled in the art would appreciate that a molecular weight of a polymer is in units of Daltons.</p>

<i>Claim 31 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
The polythioether mixture of claim 30 wherein z is 3.	"z is an integer from 3 to 6," <i>Col. 8, line 2.</i>

<i>Claim 32 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
The polythioether mixture of claim 30 wherein the mixture has an average functionality between 3 and 4.	<p>“Polyfunctionalizing agents having more than three reactive moieties (i.e., <math>z &gt; 3</math>) afford ‘star’ polymers and hyperbranched polythioethers. For example, two moles of TAC can be reacted with one mole of a dithiol to afford a material having an average functionality of 4. This material can then be reacted with a divinyl ether and a dithiol to yield a polymer, which can in turn be mixed with a trifunctionalizing agent to afford a polymer blend having an average functionality between 3 and 4.”</p> <p><i>Col. 8, lines 27-36.</i></p>

<i>Claim 33 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
The polythioether mixture of claim 30 wherein the average functionality is between 2.05 and 3.00.	<p>“For example, trifunctionalizing agents afford average functionalities of from 2.05 to 3.0, . . .”</p> <p><i>Col. 8, lines 38-39.</i></p>

<i>Claim 34 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
A curable composition comprising:	<p>“Polythioethers according to the invention are useful in applications such as coatings and sealant compositions, and preferably are formulated as polymerizable sealant compositions in applications where low temperature flexibility and fuel resistance are important. A first preferred polymerization composition thus includes at least one polyether as described herein; a curing agent or combination of curing agents, and a filler.”</p> <p><i>Col. 11, line 61 to col. 12, line 2.</i></p>
40 to 80 weight percent of a polythioether polymer according to claim 24,	<p>“The polythioether or combination of polythioethers preferably is present in the polymerizable composition in an amount from about 30 wt % to about 90 wt %, more</p>



	preferably from about 40 to 80 wt % . . .” <i>Col. 12, lines 3-6.</i>
5 to 60 weight percent of a filler, and	“Fillers useful in the polymerizable compositions of the invention include those commonly used in the art, such as carbon black and calcium carbonate (CaCO <sub>3</sub> ). Preferably, the compositions include about 5 to about 60 wt % of the selected filler or combination of fillers, . . .” <i>Col. 12, lines 33-37.</i>
10 weight percent of a curing agent.	“The compounded polymer was mixed intimately with the epoxy resin curing agent . . ., in the weight ratio of 10:1 . . .” <i>Col. 19, lines 9-11.</i>

<i>Claim 35 of the Present Reissue Application</i>	<i>Representative Support in Amended U.S. 5,912,319</i>
The curable composition of claim 34 further comprising one or more additives selected from the group consisting of pigments, cure accelerators, adhesion promoters, thixotropic agents, and isopropyl alcohol.	“In addition to the foregoing ingredients, polymerizable compositions of the invention can optionally include one or more of the following: pigments; thixotropes; accelerators; adhesion promoters; and masking agents.” <i>Col. 12, lines 57-60.</i>  Examples 14 and 15 <i>Col. 19, lines 7 and 37.</i>

**The Specification of the Parent Application from which Applicants Claim Priority Fully Supports Applicants’ Claims 24-35**

As exemplified by the support for independent claims 24, 30, and 34 below, Applicants’ domestic priority document U.S. Application No. 08/802,130 filed February 19, 1997 also supports claims 24-35. A copy of U.S. Application No. 08/802,130 is attached as Appendix E.

<i>Claim 24 of the Present Reissue Application</i>	<i>Representative Support in Applicants’ Parent 08/802,130 Specification</i>
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<p>A polythioether comprising:</p> $\text{H-S-R}^1\text{[-S-(CH}_2\text{)}_2\text{-O-(-R}^2\text{-O-)}_m\text{-(CH}_2\text{)}_2\text{-S-R}^1\text{]}_n\text{-S-H}$ <p>wherein</p>	<p>"In their most general aspect, the inventive polythioethers include a structure having the formula I</p> $\text{-R}^1\text{[-S-(CH}_2\text{)}_2\text{-O-(-R}^2\text{-O-)}_m\text{-(CH}_2\text{)}_2\text{-S-R}^1\text{]}_n\text{-"$ <p><i>Page 9, line 27.</i></p> <p>"Thus, the polythioether has the following structure:</p> $\text{HS-R}^1\text{[-S-(CH}_2\text{)}_2\text{-O-(-R}^2\text{-O-)}_m\text{-(CH}_2\text{)}_2\text{-S-R}^1\text{]}_n\text{-SH}$ <p><i>Page 12, line 26-27.</i></p>
<p><math>\text{R}^1</math> is selected from the group consisting of <math>\text{C}_{2-6}</math> n-alkylene, and a <math>\text{-[(-CH}_2\text{)}_p\text{-X]}_q\text{-(-CH}_2\text{)}_r\text{-}</math> group;</p>	<p>"<math>\text{R}^1</math> denotes a divalent <math>\text{C}_{2-6}</math> n-alkylene, <math>\text{C}_{2-6}</math> branched alkyl, <math>\text{C}_{6-8}</math> cycloalkyl or <math>\text{C}_{6-10}</math> alkylcycloalkyl group, or <math>\text{-[(-CH}_2\text{)}_p\text{-X]}_q\text{-(-CH}_2\text{)}_r\text{-}</math>,"</p> <p><i>Page 10, lines 1-2.</i></p>
<p><math>\text{R}^2</math> is selected from the group consisting of <math>\text{C}_{2-10}</math> n-alkylene, and <math>\text{C}_{6-8}</math> cycloalkylene;</p>	<p>"<math>\text{R}^2</math> denotes methylene, a divalent <math>\text{C}_{2-6}</math> n-alkyl, <math>\text{C}_{2-6}</math> branched alkyl, <math>\text{C}_{6-8}</math> cycloalkyl or <math>\text{C}_{6-10}</math> alkylcycloalkyl group, or <math>\text{-[(-CH}_2\text{)}_p\text{-X]}_q\text{-(-CH}_2\text{)}_r\text{-}</math>,"</p> <p><i>Page 10, lines 3-4.</i></p>
<p>X is selected from the group consisting of O and S;</p>	<p>"X denotes one selected from the group consisting of O, S and <math>\text{-NR}^6\text{-}</math>,"</p> <p><i>Page 10, line 5.</i></p>
<p>m is an integer between 2 and 10;</p>	<p>"m is a rational number from 0 to 10,"</p> <p><i>Page 10, lines 7.</i></p>
<p>p is an integer between 2 and 6;</p>	<p>"p is an integer ranging from 2 to 6,"</p> <p><i>Page 10, line 9.</i></p>
<p>q is an integer between 1 and 5;</p>	<p>"q is an integer from 1 to 5,"</p> <p><i>page 10, line 10.</i></p>
<p>r is an integer between 2 and 10; and</p>	<p>"r is an integer from 2 to 10."</p> <p><i>Page 10, line 11.</i></p>
<p>n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.</p>	<p>"n is an integer from 1 to 60,"</p> <p><i>Page 10, line 8.</i></p> <p>"Desirably, the inventive polythioethers have</p>

	<p>number average molecular weights ranging from about 500 to 20,000, preferably about 1,000 to 10,000, very preferably about 2,000 to 5,000.”</p> <p><i>Page 11, lines 16-18.</i></p> <p>A Dalton is defined as a unit of molecular weight having one-twelfth the mass of a carbon atom in its ground state. <i>IUPAC Compendium of Chemical Terminology</i>. A carbon atom has an atomic mass of 12.011 grams per mole. Thus, for practical purposes, a Dalton is roughly equivalent to one gram per mole. One skilled in the art would appreciate that a molecular weight of a polymer is in units of Daltons.</p>
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<i>Claim 30 of the Present Reissue Application</i>	<i>Representative Support in Applicants' Parent 08/802,130 Specification</i>
A mixture of polythioether polymers comprising: a polythioether polymer having the formula	<p>“Polythioethers having higher functionality are also within the scope of the present invention.”</p> <p><i>Page 13, lines 28-29.</i></p>
$B-\{ -S-R^1-[-S-(CH_2)_2-O-(R^2-O)_m-(CH_2)_2-S-R^1]_n-S-H \}_z$ <p>wherein</p>	<p>“Polyfunctional polythioethers according to the present invention thus preferably have the formula (III): <math>B-(A-[R^3]_y-R^4)_z</math>”</p> <p><i>Page 14, lines 15-17.</i></p> <p>“A denotes a structure having the formula I, y is 0 or 1, <math>R^3</math> denotes a single bond when y=0 and <math>-S-(CH_2)_2-[-O-R^2-]_m-O-</math> when y=1, <math>R^4</math> denotes <math>-SH</math> or <math>-S-(CH_2)_2-R^5</math> when y=0 and <math>-CH_2=CH_2</math> or <math>-(CH_2)_2-S-R^5</math> when y=1,”</p> <p><i>Page 14, lines 21-27.</i></p>
$R^1$ is selected from the group consisting of $C_{2-6}$ n-alkylene, and a $-[(-CH_2)_p-X]_q-(-CH_2)_r-$ group;	<p>“<math>R^1</math> denotes a divalent <math>C_{2-6}</math> n-alkylene, <math>C_{2-6}</math> branched alkyl, <math>C_{6-8}</math> cycloalkyl or <math>C_{6-10}</math> alkylcycloalkyl group, or <math>-[(-CH_2)_p-X]_q-(-CH_2)_r-</math>,”</p> <p><i>Page 10, lines 1-2.</i></p>

R <sup>2</sup> is selected from the group consisting of C <sub>2-6</sub> n-alkylene, and C <sub>6-8</sub> cycloalkylene;	<p>"R<sup>2</sup> denotes methylene, a divalent C<sub>2-6</sub> n-alkyl, C<sub>2-6</sub> branched alkyl, C<sub>6-8</sub> cycloalkyl or C<sub>6-10</sub> alkylcycloalkyl group, or <math>-(\text{--CH}_2\text{--})_p\text{--X--}]_q\text{--}(\text{--CH}_2\text{--})_r\text{--}</math>,"</p> <p><i>Page 10, lines 3-4.</i></p>
X is selected from the group consisting of O and S;	<p>"X denotes one selected from the group consisting of O, S and <math>\text{--NR}^6\text{--}</math>,"</p> <p><i>Page 10, line 5.</i></p>
m is an integer between 0 and 10;	<p>"m is a rational number from 0 to 10."</p> <p><i>Page 10, lines 7.</i></p>
p is an integer between 2 and 6;	<p>"p is an integer ranging from 2 to 6;"</p> <p><i>Page 10, line 9.</i></p>
q is an integer between 1 and 5;	<p>"q is an integer from 1 to 5,"</p> <p><i>page 10, line 10.</i></p>
r is an integer between 2 and 10;	<p>"r is an integer from 2 to 10."</p> <p><i>Page 10, line 11.</i></p>
z is an integer from 3 to 6;	<p>"z is an integer from 3 to 6."</p> <p><i>Page 15, line 1.</i></p>
B is a z-valent group of a polyfunctionalizing agent; and	<p>"B denotes a z-valent residue of a polyfunctionalizing agent,"</p> <p><i>Page 15, line 2.</i></p>
n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.	<p>"n is an integer from 1 to 60."</p> <p><i>Page 10, line 8.</i></p> <p>"Desirably, the inventive polythioethers have number average molecular weights ranging from about 500 to 20,000, preferably about 1,000 to 10,000, very preferably about 2,000 to 5,000."</p> <p><i>Page 11, lines 16-18.</i></p> <p>A Dalton is defined as a unit of molecular weight having one-twelfth the mass of a carbon atom in its ground state. <i>IUPAC Compendium of Chemical Terminology</i>. A carbon atom has an atomic mass of 12.011</p>

	grams per mole. Thus, for practical purposes, a Dalton is roughly equivalent to one gram per mole. One skilled in the art would appreciate that a molecular weight of a polymer is in units of Daltons.
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<i>Claim 34 of the Present Reissue Application</i>	<i>Representative Support in Applicants' Parent 08/802,130 Specification</i>
A curable composition comprising:	"A first preferred polymerizable composition thus includes at least one polythioether as described herein; a curing agent or combination of curing agents; and a filler." <i>Page 22, lines 20-22.</i>
40 to 80 weight percent of a polythioether polymer according to claim 24,	"The polythioether or combination of polythioethers preferably is present in the polymerizable composition in an amount from about 30 wt% to about 90 wt%, more preferably from about 40 to 80 wt% . . ." <i>Page 22, lines 24-25.</i>
5 to 60 weight percent of a filler and	"Fillers useful in the polymerizable compositions of the invention include those commonly used in the art, such as carbon black and calcium carbonate (CaCO <sub>3</sub> ). Preferably, the compositions include about 5 to about 60 wt % of the selected filler or combination of fillers, very preferably about 10 to 50 wt%." <i>Page 23, lines 18-21.</i>
10 weight percent of a curing agent.	"The compounded polymer was mixed intimately with the epoxy resin curing agent . . . , in the weight ratio of 10:1 . . ." <i>Page 37, lines 23-24.</i>  In Example 14, the sealant composition comprises 54 wt% polythioether, 36 wt% fillers and additives, and 10 wt% curing agent. <i>Page 37, lines 11-26.</i>

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**An Interference Between the Present Application and the '168 Patent is Appropriate**

An interference is appropriate between an application and an unexpired patent of different parties when the application and the patent contain claims to the same patentable invention. See § 2306 of the M.P.E.P., which provides, in pertinent part:

An interference may be declared between an application and a patent if the application and the patent are claiming the same patentable invention as defined in 37 C.F.R. § 1.601(n) . . .

Similarly, 37 C.F.R. § 1.601(j) notes that “[a]n interference-in-fact exists when at least one claim of a party . . . and at least one claim of an opponent . . . define the same patentable invention.”

Thus, claim 1 of the '168 patent and Applicants' claim 24 constitute interfering subject matter, and should be designated as corresponding to a common interference count, since the two claims are directed to “the same patentable invention,” as that expression is “defined in 37 C.F.R. § 1.601(n).”

37 C.F.R. § 1.601(n) explains that:

Invention “A” is the same patentable invention as invention “B” when invention “A” is the same as (35 U.S.C. § 102) or is obvious (35 U.S.C. § 103) in view of invention “B” assuming invention “B” is prior art with respect to invention “A.”

In the present case, Applicants' invention, as defined by claim 24 (invention “B”), fully anticipates the '168 invention, as defined by claim 1 (invention “A”). Moreover, as will be explained below, claim 1 of the '168 patent is substantially the same as claim 24 of the present application. Thus, the inventions of the '168 patent and the present application are directed to the same invention.

The only differences between Applicants' claims 24-33 and claims 1-6, 8, and 10-13 of the '168 patent, respectively, reside in minor changes made to Applicants' claims to provide more literal support from Applicants' specification. For ease of comparison of the claims, the claims of the '168 patent and the present reissue application are set forth side-by-side below.

<i>Claim 1 of the '168 Patent</i>	<i>Claim 24 of the Present Reissue Application</i>
<p>A polythioether comprising:</p> $R^4-S-[-R^1-S-CH_2CH_2-(R^2)_m-S-]_n-R^1-S-R^4$ <p>wherein</p> <p><math>R^4</math> is H, <math>C_{1-6}</math> alkyl, <math>C_{1-6}</math> alkyl alcohol and <math>C_{0-6}</math> alkyl substituted with <math>[-CH_2-CH_2(R^2)_m-]-X</math>, where X is halogen,</p>	<p>A polythioether comprising:</p> $H-S-R^1-[-S-(CH_2)_2-O-(R^2-O)_m-(CH_2)_2-S-R^1-]_n-S-H$ <p>wherein</p>
<p><math>R^1</math> is a <math>C_{1-10}</math> alkyl, <math>-(R^3Q)_pR^3-</math> or <math>C_6-C_{20}</math> aryl where Q is O or S, each <math>R^3</math> is independently <math>C_{1-6}</math> alkyl, and</p>	<p><math>R^1</math> is selected from the group consisting of <math>C_{2-6}</math> n-alkylene, and a <math>-[(-CH_2)_p-X]_q-(-CH_2)_r-</math> group;</p> <p>X is selected from the group consisting of O and S;</p> <p>q is an integer between 1 and 5;</p> <p>r is an integer between 2 and 10;</p> <p><u>Comment</u></p> <p><math>-[(-CH_2)_p-X]_q-(-CH_2)_r-</math> is the same as <math>-(R^3_qQ)_q-R^3_r-</math> where <math>R^3 = -(CH_2)-</math>. Since r = 2-10, <math>R^3_r</math> is a <math>C_{2-10}</math> alkylene, and p = 2-6, <math>R^3_p</math> is a <math>C_{2-6}</math> alkylene.</p>
<p>For example, when p=2, Q=O, and <math>R^3 = C_2</math> alkyl(ene), <math>-(R^3Q)_pR^3-</math> is:</p> $-CH_2CH_2-O-CH_2CH_2-O-CH_2CH_2-$	<p>For example, when p=q=r=2, and X=O, <math>-[(-CH_2)_p-X]_q-(-CH_2)_r-</math> is:</p> $-CH_2CH_2-O-CH_2CH_2-O-CH_2CH_2-$
<p>p is an integer between 0 and 6;</p>	<p>p is an integer between 2 and 6;</p>

$R^2$ is $C_{1-6}$ alkyloxy or $C_{5-12}$ cycloalkyloxy,	$R^2$ is selected from the group consisting of $C_{2-6}$ n-alkylene, and $C_{6-8}$ cycloalkylene;
m is an integer between 1 and 4, and	m is an integer between 0 and 10;
n is an integer selected to yield a molecular weight for said polythioether of between 1000 and 10,000 Daltons.	n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.

<i>Claim 2 of the '168 Patent</i>	<i>Claim 25 of the Present Reissue Application</i>
The polythioether of claim 1 wherein $R^1$ is $C_2-C_8$ alkyl.	The polythioether of claim 24 wherein $R^1$ is $C_2-C_6$ n-alkylene.

<i>Claim 3 of the '168 Patent</i>	<i>Claim 26 of the Present Reissue Application</i>
<p>The polythioether of claim 1 where <math>R^1</math> is <math>-(R^3Q)_pR^3-</math> where <math>R^3</math> in each occurrence is <math>C_{1-2}</math> and p being 1 or 2.</p> <p>For example, when <math>p=2</math>, <math>Q=O</math>, and <math>R^3 = C_2</math> alkyl(ene), <math>-(R^3Q)_pR^3-</math> is:</p> <p><math>-CH_2CH_2-O-CH_2CH_2-O-CH_2CH_2-</math></p>	<p>The polythioether of claim 24 where <math>R^1</math> is <math>-[(CH_2)_p-O]_q-(CH_2)_r-</math> wherein r, p, and q are 2.</p> <p><u>Comment</u>  <math>-[(CH_2)_p-O]_q-(CH_2)_r-</math> can be written as <math>-(R^3Q)_qR^3_r-</math> where <math>R^3 = (CH_2)-</math>.</p> <p>For example, when <math>p=q=r=2</math>, and <math>X=O</math>, <math>-[(CH_2)_p-X]_q-(CH_2)_r-</math> is:</p> <p><math>-CH_2CH_2-O-CH_2CH_2-O-CH_2CH_2-</math></p>

<i>Claim 4 of the '168 Patent</i>	<i>Claim 27 of the Present Reissue Application</i>
The polythioether of claim 1 wherein $R^2$ is $C_1-C_2$ alkyloxy.	The polythioether of claim 24 wherein $R^2$ is $C_2$ alkyleneoxy.



<i>Claim 5 of the '168 Patent</i>	<i>Claim 28 of the Present Reissue Application</i>
The polythioether of claim 1 wherein the molecular weight of said polythioether is between 2000 and 6000 Daltons.	The polythioether of claim 24 wherein the molecular weight of said polythioether ranges from about 2,000 and 5,000 Daltons.

<i>Claim 6 of the '168 Patent</i>	<i>Claim 24 of the Present Reissue Application</i>
The polythioether of claim 1 wherein R <sup>4</sup> is hydrogen.	<u>Comment</u> In claim 24, R <sup>4</sup> would be hydrogen.

<i>Claim 8 of the '168 Patent</i>	<i>Claim 29 of the Present Reissue Application</i>
The polythioether of claim 1 having an atomic percentage ratio of C:S:O of 35-49:20-60:0-20.  <u>Comment</u> In col. 5, lines 16-20 of the '168 patent, the percentage ratio is identified as the <i>percent by weight</i> of the respective atoms comprising the polythioether polymer.	The polythioether of claim 24 having an atomic weight percentage ratio of C:S:O of 35-49 : 20-60 : 0-20.

<i>Claim 10 of the '168 Patent</i>	<i>Claim 30 of the Present Reissue Application</i>
A mixture of polythioether polymers comprising: a polythioether polymer having the formula	A mixture of polythioether polymers comprising a polythioether polymer having the formula
$B-(S-[-R^1-S-CH_2CH_2-(R^2)_m-S-]_n-R^1-S-R^4)_z$ <p>where</p>	$B-\{S-R^1-[-S-(CH_2)_2-O-(R^2-O)_m-(CH_2)_2-S-R^1]_n-S-H\}_z$ <p>wherein</p>
B is a z-valent group of a polyfunctionalizing agent,	B is a z-valent group of a polyfunctionalizing agent; and
Z is an integer from 3 to 6,	z is an integer from 3 to 6,

<p><math>R^1</math> is a <math>C_{1-10}</math> alkyl, <math>-(R^3Q)_pR^3-</math> or <math>C_6-C_{20}</math> aryl where Q is O or S, each <math>R^3</math> is independently <math>C_{1-6}</math> alkyl, and</p> <p>For example, when <math>p=2</math>, <math>Q=O</math>, and <math>R^3=C_2</math> alkyl(ene), <math>-(R^3Q)_pR^3-</math> is:</p> <p><math>-CH_2CH_2-O-CH_2CH_2-O-CH_2CH_2-</math></p>	<p><math>R^1</math> is selected from the group consisting of a <math>C_{2-6}</math> n-alkylene, and a <math>-[(-CH_2)_p-X]_q-(-CH_2)_r-</math> group;</p> <p>X is selected from the group consisting of O and S;</p> <p>q is an integer between 1 and 5;</p> <p>r is an integer between 2 and 10;</p> <p><u>Comment</u>  <math>-[(-CH_2)_p-X]_q-(-CH_2)_r-</math> can be written as <math>-(R^3_qQ)_q-R^3_r-</math> where <math>R^3_r = -(CH_2)_{q,r}-</math>. Since <math>r = 2</math> to 10, <math>R^3_r</math> is a <math>C_{2-10}</math> alkylene, and <math>p = 2</math> to 6, <math>R^3_p</math> is a <math>C_{2-6}</math> alkylene.</p> <p>For example, when <math>p=q=r=2</math>, and <math>X=O</math>, <math>-[(-CH_2)_p-X]_q-(-CH_2)_r-</math> is:</p> <p><math>-CH_2CH_2-O-CH_2CH_2-O-CH_2CH_2-</math></p>
p is an integer between 0 and 6;	p is an integer between 2 and 6;
$R^2$ is $C_{1-6}$ alkyloxy or $C_{5-12}$ cycloalkyloxy,	$R^2$ is selected from the group consisting of $C_{2-6}$ n-alkylene, and $C_{6-8}$ cycloalkylene;
$R^4$ is H, $C_{1-6}$ alkyl, $C_{1-6}$ alkyl alcohol and $C_{0-6}$ alkyl substituted with $-[-CH_2CH_2(R^2)_m-]-X$ , where X is a halogen	<u>Comment</u> In claim 30, $R^4$ would be H.
m is an integer between 1 and 4, and	m is an integer between 0 and 10;
n is an integer selected to yield a molecular weight for said polythioether of between 1000 and 10,000 Daltons.	n is an integer between 1 and 60 selected so that the molecular weight of the polythioether is between 1,000 and 10,000 Daltons.

<i>Claim 11 of the '168 Patent</i>	<i>Claim 31 of the Present Reissue Application</i>
The polythioether mixture of claim 10 wherein z is 3.	The polythioether mixture of claim 30 wherein z is 3.

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<i>Claim 12 of the '168 Patent</i>	<i>Claim 32 of the Present Reissue Application</i>
The polythioether mixture of claim 10 wherein the mixture has an average functionality between 2 and 4.	The polythioether mixture of claim 30 wherein the mixture has an average functionality between 3 and 4.

<i>Claim 13 of the '168 Patent</i>	<i>Claim 33 of the Present Reissue Application</i>
The polythioether mixture of claim 12 wherein the average functionality is between 2.05 and 3.00.	The polythioether mixture of claim 30 wherein the average functionality is between 2.05 and 3.00.

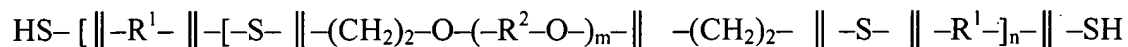
Claims 1 and 6 of the '168 patent and Applicants' claim 24 define the same polythioether structure. A direct comparison of the two polythioether structures can be made by aligning the respective structures as follows:

*Claim 1 of the '168 Patent*



In claim 6 of the '168 patent,  $R^4 = H$ .

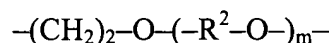
*Claim 24 of the Present Reissue Application*



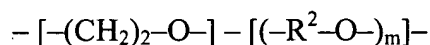
As shown in the claim comparison, the  $R^4-S-$ ,  $-R^1-$ ,  $-[-S-, -CH_2CH_2-, -S-, -R^1-]_n-$  and  $-S-R^4$  constituents of the polythioethers defined by the '168 patent and Applicants' present reissue application are comparable.

In claim 1 of the '168 patent,  $R^2$  is defined as a  $C_{1-6}$  alkyl(ene)oxy or  $C_{5-12}$  cycloalkyl(ene)oxy group and  $m$  is an integer between 1 and 4. Therefore,  $-(R^2)_m-$  includes a  $C_{2-6}$  alkyl(ene)oxy with  $m = 2$  to 4 repeat units, i.e.,  $[(CH_2)_{2-6}-O-]_{2-4}$ .

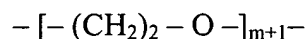
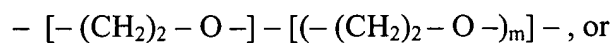
In claim 24 of Applicants' present reissue application,  $R^2$  is a  $C_{2-10}$  n-alkylene or  $C_{6-8}$  cycloalkylene, and  $m$  is an integer between 0 and 10. The alkoxy groups,



can be written as,



The  $[-(CH_2)_2-O-]$  group is a  $C_2$  alkyleneoxy. Since  $R^2$  is a  $C_{2-10}$  n-alkylene,  $R^2$  includes  $C_2$  n-alkylene, and  $(-R^2-O)_m$  includes  $(-CH_2)_2-O)_m$ . Therefore, when  $R^2$  is a  $C_2$  n-alkylene group,  $[-(CH_2)_2-O-] - [(-R^2-O)_m]-$  is



Since  $m$  is a rational number from 0 to 10,  $-(CH_2)_2-O-(R^2-O)_m-$  is a  $C_2$  alkyleneoxy with  $m+1 = 1-11$  repeat units, which overlaps with the  $m=1-4$  repeat units of the '168 patent. In a preferred embodiment of the present invention,  $m$  is an integer from 1 to 4 ('319 patent, col. 9, lines 34-38). Thus, in a preferred embodiment,  $-(CH_2)_2-O-(R^2-O)_m-$  is a  $C_2$  alkyleneoxy with 2 to 5 repeat units, which is substantially identical with the 1 to 4 repeat units of the '168 patent.

Therefore, the  $-(R^2)_m-$  group of the '168 patent, and the  $-(CH_2)_2-O-(R^2-O)_m-$  group of the present reissue application define identical subject matter.

Furthermore, the polythioethers claimed in the '168 patent and in the present reissue application encompass identical structures.

The side-by-side comparison set forth above makes it readily apparent that the claims of the '168 patent and the present reissue application are directed to the same invention, i.e., the claims define interfering subject matter, and should be designated as corresponding to the same interference count. 37 C.F.R. § 1.606.

Although the language of Applicants' claims 24-33 differs somewhat from that of the claims of the '168 patent, one of ordinary skill readily understands that these are semantic differences. For example, in the '168 patent, alkanediyl groups are incorrectly referred to as alkyl groups whereas Applicants refer to the same groups as alkylene groups. In claim 1 of the '168 patent,  $-R^1-$  is incorrectly referred to as a  $C_{1-10}$  alkyl group. Applicants refer to  $-R^1-$  as a  $C_{2-6}$  n-alkylene group. According to the *IUPAC Compendium of Chemical Terminology* (2<sup>nd</sup> Edition 1997), an alkyl group is defined as a univalent group derived from alkanes by removal of a hydrogen atom from a carbon atom, e.g.  $-C_nH_{2n+1}$ . An alkylene group is defined as an alkanediyl group commonly but not necessarily having free valencies on adjacent carbon atoms, e.g.  $-CH(CH_3)CH_2-$ . *IUPAC Compendium of Chemical Terminology* (2<sup>nd</sup> Edition 1997). However, regardless of the chemical nomenclature used, a person skilled in the chemical arts would understand the  $-R^1-$  group to be derived from an alkane group having a free valence on end carbon atoms for bonding to other constituents.

**An Interference Between the Present Application and the '135 Application is Appropriate**

An interference is appropriate between two or more pending applications of different parties when the applications contain claims to the same patentable invention. See § 2303 of the M.P.E.P., 2300-6, which provides, in pertinent part:

Where two or more applications are found to be claiming the same patentable invention, they may be put in interference, dependent on the status of the respective applications and the difference between their filing dates.

Similarly, 37 C.F.R. § 1.601(i) provides that “[a]n interference may be declared between two or more pending applications naming different inventors when, in the opinion of an examiner, the applications contain claims for the same patentable invention.” ”). Moreover, as will be explained below, claim 9 of the '135 application is substantially the same as claim 34 of the present application. Thus, the inventions of the '135 application and the present application are directed to the same invention. Thus, claim 9 of the '135 application and Applicants' claim 34 constitute interfering subject matter, and should be designated as corresponding to a common interference count, since the two claims are directed to the “same patentable invention,” as that expression is “defined in 37 C.F.R. § 1.601(n.”).

The only differences between Applicants' claims 34 and 35 and claims 9 and 10 of the '135 application, respectively, reside in changes made to Applicants' claims to provide more literal support from Applicants' specification. For ease of comparison, the claims of the '135 application and the present application are set forth side-by-side below.

<i>Claim 9 of the '135 Application</i>	<i>Claim 34 of the Present Reissue Application</i>
A curable composition comprising:	A curable composition comprising:

<p>42 to 80 weight percent of a polythioether polymer according to claim 1,</p> <p><u>Comment</u> The polythioether polymer of claim 1 has the following structure:</p> $R^4-S-[-R^1-S-CH_2CH_2-(R^2)_m-S-]_n-R^1-S-R^4$ <p>and see constituents as defined above.</p>	<p>40 to 80 weight percent of a polythioether polymer according to claim 24,</p> <p><u>Comment</u> The polythioether polymer of claim 24 has the following structure:</p> $H-S-R^1-[-S-(CH_2)_2-O-(R^2-O)_m-(CH_2)_2-S-R^1-]_n-S-H$ <p>and see constituents as defined above.</p>
<p>0.3 to 15 weight percent of a lightweight filler and</p>	<p>5 to 60 weight percent of a filler and</p> <p><u>Comment</u> Filler is generic and includes the species "lightweight filler."</p>
<p>0.1 to 20 weight percent of a curing agent.</p>	<p>10 weight percent of a curing agent.</p>

<i>Claim 10 of the '135 Application</i>	<i>Claim 35 of the Present Reissue Application</i>
The curable composition of claim 9 further comprising one or more additives selected from the group consisting of:	The curable composition of claim 34 further comprising one or more additives selected from the group consisting of:
pigments,	pigments,
cure accelerators, surfactants,	cure accelerators,
adhesion promoters,	adhesion promoters,
thixotropic agents	thixotropic agents,
and solvents.	and isopropyl alcohol.

The side-by-side comparison set forth above makes it readily apparent that the claims of the '135 application and the present reissue application are directed to the same invention, i.e.,

the claims define interfering subject matter, and should be designated as corresponding to the same interference count. 27 C.F.R. § 1.606.

**Applicants' Pending New Claims 24-33 are Directed to Patentable Subject Matter**

Applicants' claims 24-33 are identical, or very similar to the claims of the '168 patent.

Specifically, Applicants' independent claim 24 is substantially identical to independent claim 1 of the '168 patent. Because patent claim 1 of the '168 patent defines a patentable invention, Applicants' corresponding pending claim 24 must be patentable for the same reasons. It follows that if independent claim 24 defines patentable subject matter, then claims 25-29, that are dependent upon claim 24, also must define patentable subject matter.

Applicants' independent claim 30 is substantially identical to independent claim 10 of the '168 patent. Because patent claim 10 of the '168 patent defines a patentable invention, Applicants' corresponding pending claim 30 must be patentable for the same reasons. It follows that if independent claim 30 defines patentable subject matter, then claims 32-33, which are dependent upon claim 30, also must define patentable subject matter.

**Applicants' Pending Claims 34 and 35 are Directed to Patentable Subject Matter**

Applicants' claims 34 and 35 are identical or very similar to claims 9 and 10 of the '135 application.

Specifically, Applicants' independent claim 34 is directed to a curable composition comprising a polythioether polymer and is similar to independent claim 9 of the '135 application. Independent claim 9 of the '135 application is directed to a process for forming the polythioether polymer of claim 1 of the '168 patent. Because the polythioether polymer of claim 9 of the '135 application is a patentable invention, it follows that the curable compositions of claim 9 of the



'135 application and claim 34 of Applicants' application define patentable subject matter. It follows that if independent claim 34 defines patentable subject matter then claim 35, which is dependent on claim 34, also must define patentable subject matter.

### **Proposed Counts**

In proposing a count for this interference, Applicants have followed the widely-used convention of linking two broadest corresponding claims from the present reissue application and the '168 patent by "OR."

For the Examiner's convenience, Applicants have attached courtesy copies of the "Interference-Initial Memorandum" Form PTO-850 as Appendix F. Copies of the proposed count are also provided as an attachment to that Memorandum as required by Rule 604.

Applicants' proposed count satisfies the requirement of C.F.R. § 1.606 that at the time of declaring an interference, a count shall not be narrower in scope than any application claim that is patentable over the prior art and designated to correspond to the count or any patent claim that corresponds to the count.

In structuring the interference, all claims in the involved cases which are directed to patentably indistinct subject matter should be designated as corresponding to the count. Thus, in view of the foregoing, claims 1-6, 8, and 10-13 of the '168 patent and Applicants' claims 24-33 should be designated as corresponding to the count, and claims 9 and 10 of the '135 application and Applicants' claims 34 and 35 should be designated as corresponding to the count.

### **Count/Claim Correspondence**

Claims 1-6, 8, and 10-13 of the '168 patent and claims 9 and 10 of the '135 application should be designated as corresponding to the count, since all of these claims are directed to

polythioethers, mixtures of polythioether polymers, and curable compositions of polythioether polymers. There is no indication that claims 1-6, 8, and 10-13 of the '168 patent and claims 9 and 10 of the '135 application define a separately patentable invention, and it is a fundamental tenet of interference law that "[a]ll claims in the application and patent which define the same patentable invention as a count shall be designated to correspond to the count." 37 C.F.R. § 1.606.

### **Relevant Dates**

The present reissue application has a filing date of February 19, 1997 which is before the March 9, 2000 priority date of the '168 patent and before the March 9, 2001 priority date of the '135 application. Consequently, Applicants should be designated as the senior party for the proposed count.

### **The Requirements of 35 U.S.C. § 1.135(b) are Satisfied**

The '168 patent issued on February 25, 2003. The amendment presents claims 24-33 which define substantially the same subject matter as the claims of the '168 patent. 35 U.S.C. § 1.135(b)(1) requires that "[a] claim which is the same as, or for the same or substantially the same subject matter as, a claim of an issued patent may not be made in any application unless such a claim is made prior to one year from the date on which the patent was granted." Because Applicants have presented these claims within one year of the February 25, 2003 issuance of the '168 patent, Applicants have complied with the requirements of 35 U.S.C. § 1.135(b)(1).

The '135 application was published on July 10, 2003. The amendment presents claims 34 and 35 which define substantially the same subject matter as claims 9 and 10 of the '135

application. 35 U.S.C. § 1.135(b)(2) requires that “[a] claim which is the same as, or for the same or substantially the same subject matter as, a claim of an application published under section 122(b) of this title may be made in an application filed after the application is published only if the claim is made before one year after the date on which the application is published.” Because Applicants have presented these claims within one year of the July 10, 2003 publication of the ’135 application, Applicants have complied with the requirements of 35 U.S.C. § 1.135(b)(2).

### **Conclusion**

Applicants have demonstrated that claims 24-35 of the present reissue application define allowable subject matter that is patentably indistinct from claims 1-6, 8, and 10-13 of the ’168 patent and claims 9 and 10 of the ’135 application, and thus satisfies the requirements of Rule 607. Consequently, an interference based on the proposed count is appropriate.

Accordingly, Applicants request the Examiner issue the following relief:

- (1) Prepare and transmit Form PTO-850 (completed sample enclosed as Appendix F) recommending the Administrative Patent Judge institute an interference between the present reissue application and the ’168 patent and the ’135 application;
- (2) Propose the count as set forth in this Request and designate Applicants’ claims 24-33 and claims 1-6, 8, and 10-13 of the ’168 patent and Applicants’ claims 34 and 35 and claims 9 and 10 of the ’135 application as corresponding to the count; and
- (3) On Form PTO-850, indicate Applicants’ entitlement to benefit of the filing date of U.S. 5,912,319 for the proposed count and designate Applicants as senior party for this count.

Further, upon a determination by the Examiner that an interference should be declared, Applicants respectfully request that the Examiner issue a Notice suspending prosecution of the instant reissue application pending declaration of an interference.

Please grant any extensions of time required to enter this response and charge any additional required fees to our Deposit Account No. 06-0916.

Respectfully submitted,

FINNEGAN, HENDERSON, FARABOW,  
GARRETT & DUNNER, L.L.P.

Dated: February 25, 2004

By: 

William R. Lambert  
Reg. No. 44,857

CERTIFICATE OF EXPRESS MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service's "Express Mail Post Office to Addressee" service under 37 CFR § 1.10, in an envelope addressed to: MAIL STOP REISSUE, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on February 25, 2004. Express Mail Label No.: EV 351293862 US.

Signed: 

Linda Phillips